What is claimed is:

1. An inspection method, comprising:

obtaining a first optical characteristic of a projection optical system by transferring an image of an aberration measurement unit of a photomask on a first resist film coated on a first wafer by use of a first polarized exposure light;

obtaining a second optical characteristic of the projection optical system by transferring the image of the aberration measurement unit on a second resist film coated on a second wafer by use of a second exposure light having a polarization state different from the first exposure light; and

calculating a difference between the first and second optical characteristics.

2. The inspection method of claim 1, wherein the first exposure light is a linearly polarized light.

3. The inspection method of claim 1, wherein the second exposure light is a polarized light orthogonal to polarized light of the first exposure light.

4. The inspection method of claim 1, wherein the second exposure light is a nonpolarized light.

5. The inspection method of claim 1, wherein at least any one of the first and second exposure light is polarized by a polarizer formed so as to be opposite to the aberration measurement unit of the photomask.

6. The inspection method of claim 1, wherein the first and second exposure light

are polarized by a polarizer formed on a pellicle.

7. The inspection method of claim 1, wherein the first and second optical characteristics are aberrations of a projection lens in the projection optical system.

8. The inspection method of claim 7, wherein an aberration of the projection lens is any one of a coma aberration, a spherical aberration, astigmatism and a 3θ aberration.

9. The inspection method of claim 7, wherein measurement of the aberration is performed under a three-beam interference condition.

10. The inspection method of claim 7, wherein the aberration is expressed by aberration coefficients of a Zernike polynomial.

11. A photomask, comprising:

a transparent substrate having a first surface and a second surface opposite to the first surface;

an aberration measurement unit disposed on the first surface; and

a polarizer disposed so as to be opposite to the aberration measurement unit on the second surface.

12. The photomask of claim 11, wherein the polarizer comprises:

a first polarizer polarizing an exposure light to a first polarization state; and

a second polarizer polarizing the exposure light to a second polarization

state different from the first polarization state.

13. The photomask of claim 11, wherein the polarizer is provided by a line and space pattern.

14. The photomask of claim 11, wherein the aberration measurement unit has a plurality of aberration measurement marks which include a line and space pattern having a period so as to satisfy one of a three-beam interference condition and a two-beam interference condition.

15. The photomask of claim 12, wherein the first polarization state is a linearly polarized state.

16. The photomask of claim 12, wherein a polarization plane of the second polarization state is orthogonal to a polarization plane of the first polarization state.

17. The photomask of claim 12, wherein the second polarization state is a nonpolarized state.

18. The photomask of claim 13, wherein a period of the line and space pattern of the polarizer is equal to or less than a wavelength of an exposure light.

19. A photomask, comprising:

a transparent substrate having a first surface;

an aberration measurement unit disposed on the first surface;

a pellicle provided as a second transparent substrate having a second surface, the pellicle disposed opposite to the first surface; and

a polarizer disposed so as to be opposite to the aberration measurement unit on the second surface.

20. The photomask of claim 19, wherein the polarizer comprises:

a first polarizer polarizing an exposure light to a first polarization state; and

a second polarizer polarizing the exposure light to a second polarization state different from the first polarization state.

21. The photomask of claim 19, wherein the polarizer is provided by a line and space pattern.

22. The photomask of claim 19, wherein the aberration measurement unit has a plurality of aberration measurement marks which include a line and space pattern having a period so as to satisfy one of a three-beam interference condition and a two-beam interference condition.

23. The photomask of claim 20, wherein the first polarization state is a linearly polarized state.

24. The photomask of claim 20, wherein a polarization plane of the second polarization state is orthogonal to a polarization plane of the first polarization state.

25. The photomask of claim 20, wherein the second polarization state is a nonpolarized state.

26. The photomask of claim 21, wherein a period of the line and space patterns of the polarizer is equal to or less than a wavelength of an exposure light.